



# **COMMONWEALTH of VIRGINIA**

## **DEPARTMENT OF ENVIRONMENTAL QUALITY TIDEWATER REGIONAL OFFICE**

Molly Joseph Ward  
Secretary of Natural Resources

5636 Southern Boulevard, Virginia Beach, Virginia 23462  
(757) 518-2000 Fax (757) 518-2009  
[www.deq.virginia.gov](http://www.deq.virginia.gov)

David K. Paylor  
Director

Maria R. Nold  
Regional Director

### **STATEMENT OF LEGAL AND FACTUAL BASIS**

Valley Proteins Incorporated  
Accomac, Virginia  
Permit No. TRO-40483

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Valley Proteins Incorporated has applied for a Title V Operating Permit Significant Modification for its Accomac, Virginia facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Permit Writer/Contact:

\_\_\_\_\_  
Yen T. Bao  
(757) 518-2195

Date: February 5, 2015

Regional Air Permits  
Manager:

\_\_\_\_\_  
Troy D. Breathwaite

Date: February 5, 2015

Regional Director:

\_\_\_\_\_  
Maria R. Nold

Date: February 5, 2015

## I. FACILITY INFORMATION

### Permittee

Valley Proteins Incorporated  
22528 Lankford Highway  
Accomac, Virginia 23301

### Facility

Valley Proteins, Inc. - Accomac Division  
22528 Lankford Highway  
Accomac, Virginia 23301

County-Plant Identification Number: 51-001-00010

### A. SOURCE DESCRIPTION

NAICS 311613 – rendering and meat byproduct processing

The facility is a rendering plant which converts inedible animal by-products and used cooking oil into solid proteins and liquid fats by the use of steam, heat, dehydration and mechanical separation procedures. This operation was part of Perdue Farms Incorporated facility, registration number 40483, which was sold in 2012 to Valley Proteins, Inc. The sale did not include the poultry processing plant, the wastewater treatment plant, and the emergency generator. However, by mutual agreement between the two companies, Perdue's Registration Number, the Title V permit dated February 21, 2011, and all underlying permits were transferred in its entirety to Valley Proteins on October 22, 2012, with the expectation that the facility will apply for permit amendments to reflect its newly-acquired operation. Perdue will have to apply for its own permits for its remaining activities under a new registration number (#61685).

DEQ has examined the possibility that the two facilities belong to one single stationary source for both PSD and Title V permitting purposes. The definition of a stationary source is generally similar in both regulations. A stationary source shall include "all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control). Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same "major group" (i.e., which have the same two-digit code) as described in the Standard Industrial Classification Manual". The Perdue facility (NAICS 311615, SIC 2015) and the Valley Proteins facility (NAICS 311613; SIC 2013) share the same industrial grouping and are located on contiguous pieces of property. Therefore, the stationary source status of the two facilities revolves around the issue of common control. In a letter dated 8/05/2013, the facilities' representative provided the following details of the business arrangement between Valley Proteins and Perdue:

- Valley Proteins and Perdue have no financial interests in one another;
- Valley Proteins and Perdue do not have in common any employees, officers, or members of their respective governing boards;
- Valley Proteins and Perdue do not share any payroll activities, employee benefits, health plans, or other administrative functions; and
- Valley Proteins and Perdue facilities are not dependent upon one another for operation. Valley Proteins' rendering operation has contracts with other Perdue facilities in Maryland and Delaware as well as with other third-party entities, and obtains less than half of its byproduct material from the Perdue facility in Accomac. The latter, likewise, is not dependent on the operation of the Valley Proteins in Accomac as it can send its byproduct material to other rendering plants in the event that the Valley Proteins Accomac rendering facility is not operational.

In light of the preceding, DEQ has determined that Valley Proteins and Perdue, while located on contiguous pieces of property and sharing the same industrial grouping, are not under common control as defined in state and federal regulations and guidance. Therefore, they are two separate sources. The determination was sent to the facilities' representative on September 26, 2013.

The Valley Proteins facility is a Title V major source of SO<sub>2</sub> and NO<sub>x</sub>, located in an attainment area for all pollutants. As a separate source from Perdue, it is not a PSD major source based on the potential to emit of boilers as limited by permits. The current underlying permits are the SOP dated January 21, 2015 and the minor NSR permit dated 9/9/11. The latter is for a rental boiler that may be brought on site when needed. The SOP addresses emission units for the rendering plant operation that has four boilers, and an odor control system. Odor control requirements are state-only enforceable, hence, they are in the State-Only Enforceable Requirements section of the permit.

## II. COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit on 8/22/14, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

## III. EMISSIONS INVENTORY

A copy of the 2013 annual emission update is attached. Emissions are summarized in the following table.

2013 Actual Criteria Pollutant Emission in Tons/Year				
VOC	CO	SO <sub>2</sub>	PM <sub>10</sub>	NO <sub>x</sub>
0.4	5.6	49.0	10.9	29.7

## IV. REQUESTED MODIFICATION

This Title V permit significant modification for Valley Proteins is to remove the emission units that were not acquired from Perdue on the 10/22/12 transfer date, and also to incorporate changes that have been made in the underlying permits since the transfer.

Initially, the underlying permits included the 8/3/07 minor NSR for the rendering plant equipment with four permanent boilers and an emergency generator, the 9/9/11 minor NSR for the rental boiler, and the 1/23/06 SOP for odor control. The facility submitted a permit application on 2/27/14 for an SOP that combines the 8/03/07 permit and the 1/23/06 SOP; it wants to keep the rental boiler permit separate. The permit combination is allowed in accordance with 9 VAC 5-80-820. The main purpose is to remove permit conditions related to the emergency generator in the 8/3/07 NSR, and those related to the wastewater treatment plant in the 1/23/06 SOP (state-only enforceable odor control requirements) as those units were not purchased by Valley Proteins. In addition, the facility wants to replace the poultry fat fuel allowed for the boilers in the 8/03/07 NSR with the finished animal vegetable oil product (FAVOP). The latter has emission factors different from poultry fat, based on the facility's stack test results: lower for PM, slightly higher for CO, SO<sub>2</sub> and VOC, and significantly higher for NO<sub>x</sub>. The net emission increase, calculated in accordance with Article 6 (9 VAC 5-80-1100 et seq.), indicated

that the change is an Article 6 modification. Therefore, the permit action is an SOP significant amendment which needs to undergo public notice. The SOP was issued on 11/18/14 following a 30-day public comment period.

While the above SOP was going through final processing steps, the facility submitted an application to amend the SOP to add natural gas as a permitted fuel without operating-hour limitation for the boilers. As such, the worst-case emissions for the boilers increase for CO and VOC. Even though the increases are below the exemption level in 9 VAC 5-80-1105 D, case-by-case determination of emission limits for the boilers using natural gas had to be made, and the permit limits for CO and VOC had to be changed. Therefore, the permit action is another SOP significant amendment that needs to undergo public notice. To save time and resource, the SOP draft was advertized for public comments at the same time with this Title V permit modification which incorporates all the changes up to date. The SOP may be issued after a 30-day public comment period while the Title V permit may be issued after the required EPA comment period of at least 45 days.

## **V. APPLICABILITY OF 9 VAC 5-80-230**

Besides the removal of equipment that was not conveyed from Perdue, this Title V permit modification will incorporate the additional approved fuels and related changes in emission limits for the boilers as permitted in the new underlying SOP. These changes do not meet the minor permit modification qualifications in 9 VAC 5-80-210. Therefore, this modification will be processed using the Significant Modification Procedures as defined in 9 VAC 5-80-230.

## **VI. CHANGES TO THE TITLE V OPERATING PERMIT AS RELATED TO POULTRY PROCESSING PLANT BOILER REQUIREMENTS**

Section on poultry processing plant boilers is removed because Valley Proteins does not own or operate the plant.

## **VII. CHANGES TO THE TITLE V OPERATING PERMIT AS RELATED TO RENDERING PLANT BOILER REQUIREMENTS (Emission Units ES-7, ES-8, ES-9 and ES-10)**

Requirements related to the emergency generator are removed because the unit is not owned or operated by Valley Proteins.

The rendering plant, formerly called the protein conversion plant, has four permanent boilers (ES-7 through 10). Note that the rental boiler TB1 is addressed separately. Applicable requirements have undergone some changes in accordance with the latest underlying SOP dated January 21, 2015. The changes are discussed below.

### **A. Limitations**

Finished Animal Vegetable Oil Product (FAVOP) is added as an approved fuel for boilers ES-8, ES-9 and ES-10, and natural gas is added for all four boilers ES-7 through 10.

Among the fuels, FAVOP has the worst emission factor for NO<sub>x</sub> while natural gas does so for CO and VOC. As a result, the NO<sub>x</sub> lbs/hr emission limits increase for ES-8 through 10, and CO and VOC lbs/hr emission limits increase for all boilers (Conditions 7, 8 and 9). The emission rate increases do not trigger the applicability of NSPS Subpart Dc to boilers ES-7 and ES-8 because there are no standards for NO<sub>x</sub>, CO or VOC in the Subpart and hence, the change does not meet the definition of a modification in 40 CFR 60.2.

The annual emission limits for all four boilers, combined, in Condition 10 are increased for CO and VOC to accommodate the use of natural gas at any time. The limits for SO<sub>2</sub> and NO<sub>x</sub> are unchanged because they are the historical emission caps accepted by the previous owner to avoid PSD permitting requirements during various equipment modifications, and Valley Proteins, Inc. also wants to keep the facility's current PTE below the PSD size. The facility has flexibility in allocating fuels to the boilers. Only ES-7 has a residual oil throughput limit (Condition 2) and its own annual emission limits (Condition 9). The distillate oil and FAVOP throughput limits for boilers ES-8 through 10 are determined by the combined emission limits for all boilers (Condition 10); this is made clear in Condition 2 in this permit modification to avoid the possible misunderstanding that boilers ES-8 through 10 have no limits at all.

Note that the emission limits for particulate matter should not be affected by the additional fuels which have lower PM emission factors. However, minor changes are made to correct inadvertent errors from previous underlying permits, and to clearly indicate that the values are for filterables only or including the condensable fraction in accordance with current permitting guidance.

#### **B. Monitoring**

As in the latest underlying SOP dated January 21, 2015, the required continuing compliance determination by weekly visible emissions observations of the boiler stacks makes an exception for natural gas combustion because it does not give rise to visible emissions. The periodic monitoring is required if a liquid fuel is combusted in one or more days in any calendar week (see Condition 15).

There is no other change beyond the removal of the condition related to the emergency generator.

#### **C. Testing**

There is no change.

#### **D. Recordkeeping and Reporting**

There is no significant change other than the removal of the conditions related to the emergency generator and the substitution of FAVOP for poultry fat.

On-site recordkeeping condition (Condition 18) has always required monthly emissions calculations for the boilers to arrive at the annual emissions as the sum of each consecutive 12-month period to demonstrate compliance with the annual emission caps in Condition 10. It is understood that the monthly fuel consumptions of each fuel by each boiler must have been recorded before those calculations can be made. However, as NSPS Subpart Dc explicitly requires records of monthly amounts of each fuel combusted by each affected boiler, they are now required in the underlying SOP and carried over to this Title V permit modification (Condition 18.a).

#### **E. Streamlined Requirements**

There are no streamlined requirements other than the General Conditions. Note that Condition 13 of the January 21, 2015 SOP (Plant-wide Emission Limits, referring to total emissions from all boilers and the rendering process) is in the Facility-Wide Conditions Section (Condition 45).

## **VIII. CHANGES TO THE TITLE V OPERATING PERMIT SECTION ON RENTAL BOILER REQUIREMENTS (Emission Unit ID# TB1)**

The underlying minor NSR permit dated 9/09/11 is unchanged. However, a few minor changes are necessary in this Title V permit modification. The facility requested that the make and model, and the date of manufacture of the rental boiler not specified in the equipment list because those factors are unknown until the next time a boiler is needed on site. The request is deemed acceptable except that it still has to be a newer boiler, subject to NSPS Subpart Dc.

### **A. Limitations**

The PM-10 emission limits are clarified as for filterables (Condition 27) after verification by emission calculations.

The Permit Invalidation Condition in the current Title V permit is removed because, according to the emission inventory, a rental boiler was installed and operated in 2012.

### **B. Testing**

It is made clear in Condition 30 that each time a rental boiler is brought on-site, Initial Compliance Determination by visible emission evaluation has to be performed as required by NSPS Subpart Dc.

### **C. Monitoring**

No change is needed.

### **D. Recordkeeping**

No change is needed.

### **E. Notification and Reporting**

It is made clear in Condition 33 that each time a rental boiler is brought on-site, Initial Notifications to DEQ and EPA has to be made.

## **IX. CHANGES TO THE TITLE V OPERATING PERMIT SECTION ON MACT SUBPART JJJJJJ REQUIREMENTS ON BOILERS (Emission Units ID# ES-7, ES-8, ES-9, ES-10, and TB1)**

All boilers at the facility are affected existing sources according to MACT Subpart JJJJJJ (40 CFR 63.11194(b)), under the subcategory of existing "biomass-fired or oil-fired units with heat input capacity of 10 million BTU/hour and greater" in Table 2 of the MACT. Applicable requirements are unchanged from the current permit except that the compliance date of 3/21/14 has passed, hence, the Initial Notification, Notice of Compliance Status, one-time energy assessment and initial biennial tune-up which had been completed can be removed from the permit. Additionally, the boilers are now allowed to burn natural gas. If any boiler meets the definition of a gas-fired boiler (40 CFR 63.11237), it is not subject to the MACT (40 CFR 63.11195(e)). This exclusion is addressed in the permit as discussed below. Of course, in accordance to the Federal Register excerpts from the background document and from the preamble, if a switch back to oil is made, an initial notification of applicability within 30 days of fuel switch has to be submitted to EPA. Compliance must then be demonstrated within 180 days, and continuing compliance demonstration such as bi-annual tune-ups has to be met. If the

facility wants to go back to natural gas, then they would need to notify EPA and would no longer be subject. If they switch back to oil, then repeat above.

**A. Limitations**

The gas-fired boiler exclusion of MACT JJJJJ is included in the Requirements by Reference Condition 35.

**B. Monitoring**

Continuing compliance demonstration by biennial tune-ups is required unless the exclusion for gas-fired boilers applies (Condition 36).

**C. Testing**

The one-time energy assessment has been done, hence, only the procedure for the continuing biennial tune-up is included here (Condition 37).

**D. Recordkeeping**

It is added that the MACT recordkeeping requirements do not apply if any boiler meets the gas-fired boiler exclusion.

**E. Reporting**

Biennial Compliance Certification reports must be prepared and submitted upon request (40 CFR 63.11225(b)).

**X. CHANGES TO THE TITLE V OPERATING PERMIT SECTION ON RENDERING PROCESS EQUIPMENT REQUIREMENTS (Emission Units # ES-11A, ES-11B, AND ES-12)**

Visible emission limits and visible emission observations for the lime silo stack are removed because the wastewater treatment plant is not owned or operated by Valley Proteins.

**XI. CHANGES TO THE TITLE V OPERATING PERMIT- NEW SECTION- FACILITY-WIDE CONDITIONS SECTION**

The January 21, 2015 SOP has an emission cap established for the rendering plant boilers (ES-7 through 10) and the rendering process, combined. Therefore, it should be placed in a facility-wide section. Other requirements that would have been repeated in different permit sections can be located here as well.

**A. Limitations**

The above emission cap is in Condition 45. The general condition on "Violation of Ambient Air Quality Standards" from the SOP is placed here (Condition 46) as it has no equivalence in the Title V General Conditions Section.

**B. Recordkeeping**

Records to demonstrate compliance with the above emission cap is required (Condition 47).

### **C. Testing**

Two boilerplate conditions on testing are placed here.

## **XII. CHANGES TO THE TITLE V OPERATING PERMIT- SECTION ON INSIGNIFICANT EMISSION UNITS**

Feather singers are removed as they do not belong to the Valley Proteins facility. Two existing fuel oil tanks are added for completeness as requested by the facility.

## **XIII. CHANGES TO THE TITLE V OPERATING PERMIT- SECTION ON PERMIT SHIELD & INAPPLICABLE REQUIREMENTS**

Discussion on NSPS Subpart IIII as related to the emergency generator is removed as the unit is no longer with the facility. The inapplicability of NSPS Kb to the fuel oil tanks is addressed.

## **XIV. CHANGES TO THE TITLE V OPERATING PERMIT – SECTION ON STATE-ONLY APPLICABLE REQUIREMENTS**

Conditions related to the wastewater treatment plant are removed as the plant does not belong to the Valley Proteins facility. Also removed are all references to the Odor Control System Operation and Maintenance Manual (the Manual) which was an enforceable attachment to the original odor control SOP permit (1/23/06). The latter was a result of a Consent Order. The Manual is a lengthy Operation & Maintenance manual which may undergo frequent changes in response to equipment age or condition. The requirement of DEQ's approval for each change in the Manual may be a useful enforcement tool initially but no longer necessary. Besides, written operating procedures and maintenance schedule are already required to be kept onsite (Condition 109) together with maintenance records (Condition 111).

## **XV. PUBLIC PARTICIPATION**

The proposed permit will be placed on public notice in the Eastern Shore News newspaper from Saturday, December 20, 2014 to Tuesday, January 20, 2015.